Participant Questionnaire

Participant number: 11	Date: 3 July 202
Location: Brescia, IT	
HRC Study / Algorithms tested: HAMP, STAP-POF	
Study Conducted by: <u>Jared Flowers</u>	

Participant link lengths/dimensions: (meters, "spine" is pelvis to shoulder midpoint, "shoulders" is shoulder to shoulder)

Spine	
Neck	
Shoulders	-31

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, 24

Right Upper Arm	.31
Right Forearm	.25

Participant joint diameter: (meters)

Left Elbow	-085
Left Wrist	-06

Right Elbow	.085
Right Wrist	.062

Questions:

- A. How safe did you feel? (0 is not safe at all, 5 is neutral, 10 is very safe)
- B. Do you think the robot hindered your motions during the task? (0 is robot completely prevented your motions, 5 is neutral, 10 is robot did not impede you motion)
- C. Did the robot perform logical motions? (0 is robot motions made no sense to you, 5 is neutral, 10 is robot motions made sense to you)
- D. What is your overall satisfaction with the HRC task? (0 is you would not work in this HRC cell again, 5 is neutral, 10 is you enjoyed working in this cell with the robot)

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For Task 1 (engine parts): (circle your answer to each question)

Task 1, Me	thod 1:						and the second of the second of			2	
Question A	A: (0 is not	safe at all, 5	is neutral	, 10 is very s	safe)	00000000					
0	1	2	3	4	5	6	7	8	X	10	
Question 6	3: (0 is rob	ot complete	ly prevent	ed your mot	ions, 5 is r	neutral, 10 i	s robot did	not impede	e you motic	on)	
0	1	2	3	4	5	6	7	8	7	10	
Question (C: (0 is rob	ot motions r	nade no se	ense to you,	5 is neutra	al, 10 is rob	ot motions	made sens	e to you)		
0	1	2	3	4	5	6	7	*	9	10	
Question D	Question D: (0 is you would not work in this HRC cell again, 5 is neutral, 10 is you enjoyed working in this cell with the robot)										
О	1	2	3	X	5	6	7	8	9	10	

Task 1, Me	ethod 2:	The second secon								l
Question	A: (0 is not	safe at all,	5 is neutral	, 10 is very	safe)		6.1			
0	1	2	3	4	5	6	7	*	9	10
Question	B: (0 is rob	ot complete	ly prevent	ed your mo	tions, 5 is i	neutral, 10 is	robot did	not impede	you motic	on)
0	1	2	3	4	5	6	7	18	9	10
Question	C: (0 is rob	ot motions	made no se	ense to you	, 5 is neutr	al, 10 is robo	ot motions	made sens	e to you)	
o	1	2	3	*	5	6	7	8	9	10
Question D	Question D: (0 is you would not work in this HRC cell again, 5 is neutral, 10 is you enjoyed working in this cell with the robot)									
0	1	2	3	4	5	25	7	8	9	10

Task 1, Me	thod 3:					12 11 11			4	3	
Question /	A: (0 is not	safe at all, !	5 is neutral	, 10 is very	safe)		1				
0	1	2	3	4	5	6	7	&)	9	10	
Question I	3: (0 is rob	ot complete	ly prevente	ed your mo	itions, 5 is r	neutral, 10 i	s robot did	not impede	e you moti	on)	
0	1	2	3	4	5	6	7	8	9	10	
Question (C: (0 is rob	ot motions	made no se	ense to you	, 5 is neutra	al, 10 is rob	ot motions	made sens	e to you)		
0	1	2	3	4	5	6	7	3	9	10	
Question D	Question D: (0 is you would not work in this HRC cell again, 5 is neutral, 10 is you enjoyed working in this cell with the robot)										
0	1	2	3	4	\$∕	6	7	8	9	10	

Comments: Experience: 7 Didn't like less predictable motions of

method 2 slower human motions

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For Task 2 (Sharework parts: metal tabs, cylinders, pallets): (circle your answer to each question)

Task 2, Mo	ethod 1:									2	
Question	A: (0 is not	safe at all,	5 is neutral	, 10 is very	safe)	_					
0	1	2	3	4	5	6	7	& C	9	10	
Question	Question B: (0 is robot completely prevented your motions, 5 is neutral, 10 is robot did not impede you motion)										
0	1	2	3	4	5	6	7	8	X	10	
Question	C: (0 is rob	ot motions	made no se	nse to you	, 5 is neutr	al, 10 is rob	ot motions	made sens	e to you)		
0	1	2	3	4	5	6	D	8	9	10	
Question D	Question D: (0 is you would not work in this HRC cell again, 5 is neutral, 10 is you enjoyed working in this cell with the robot)										
0	1	`2	3 -	*	5	6	7	8	9	10	

Task 2, M	ethod 2:			11 Tag			Ti are			l	
Question	A: (0 is not	safe at all,	5 is neutral	, 10 is very	safe)						
0	1	2	3	4	5	6	×	8	9	10	
Question	Question B: (0 is robot completely prevented your motions, 5 is neutral, 10 is robot did not impede you motion)										
0	1	2	3	4	5	6	7	8	9	10	
Question	C: (0 is rob	ot motions	made no se	ense to you	ı, 5 is neutr	al, 10 is rob	ot motions	made sen	se to you)		
0	1	2	3	*	5	6	7	8	9	10	
Question D	Question D: (0 is you would not work in this HRC cell again, 5 is neutral, 10 is you enjoyed working in this cell with the robot)										
0	1	2	3	4	5	6 0	7	8	9	10	

Task 2, M	ethod 3:									3
Question	A: (0 is not	safe at all,	5 is neutra	l, 10 is very	safe)					
0	1	2	3	4	5	6	X	8	9	10
Question	B: (0 is rob	ot complete	ely prevent	ed your mo	otions, 5 is n	eutral, 10 i	s robot did	not impede	e you motic	on)
0	1	2	3	4	5	6	7	*	9	10
Question	C: (0 is rob	ot motions	made no se	ense to you	ı, 5 is neutra	al, 10 is rob	ot motions	made sens	e to you)	
0	1	2	3	4	5	6	7	*	9	10
Question [Question D: (0 is you would not work in this HRC cell again, 5 is neutral, 10 is you enjoyed working in this cell with the robot)									
0	1	2	3	4	\S	6	7	8	9	10

Comments: T2-m4: A 9, B 7, C 8, D 7 T2-m5: A 8, B 7, C 7, D 6

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